rotating mechanism for coupling ends of a first casing and a second casing superposed on each other, and for opening or closing the portable terminal by rotating the first casing relative to the second casing with surfaces of the same side in the first casing and the second casing directed substantially in the same direction. The first casing is relatively spaced away from the second casing at least in an initial stage of the rotation of the first casing.

[0013] The forgoing and other features and advantages of preferred embodiments will be more readily apparent from the following detailed description, which proceeds with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] **FIG. 1** is a diagram showing a portable phone as an example of a portable terminal of the present invention: **FIG. 1**(A) is a plan view showing its closed condition and **FIG. 1**(B) is a plan view showing its opened condition;

[0015] **FIG. 2** is a diagram showing a preferred embodiment of a coupling unit arranged in the portable terminal of **FIG. 1**. **FIG. 2**(A) is a rear view, **FIG. 2**(B) is a side view, and **FIG. 2**(C) is a front view;

[0016] **FIG. 3** is a cross section showing the coupling unit of the preferred embodiment arranged in the portable terminal of **FIG. 2**;

[0017] **FIG. 4** is a cross-sectional view taken on line X-X of **FIG. 3**;

[0018] FIGS. **5**(A) to **5**(C) are perspective views each showing an opened or closed configuration in the preferred embodiment of the portable terminal of **FIG. 1**;

[0019] FIGS. **6**(A) and **6**(B) are side views each showing an opened or closed configuration in the preferred embodiment of the portable terminal of **FIG. 1**;

[0020] FIGS. **7**(A) and **7**(B) are cross sections each showing an opened or closed configuration of the coupling unit in the preferred embodiment of **FIG. 2**;

[0021] FIGS. **8**(A) to **8**(D) are perspective views for explaining the method of opening or closing the first casing and the second casing in another preferred embodiment of the portable terminal;

[0022] **FIG. 9** is a configuration diagram for a rotating mechanism in the preferred embodiment of the portable terminal of **FIG. 8**;

[0023] **FIG. 10** is an exploded view of an embodiment of the rotating mechanism in the portable terminal of **FIG. 8**. **FIG. 10**(A) is a view as seen from the above and **FIG. 10**(B) is a view as seen from below;

[0024] **FIG. 11** is a cross section of an embodiment of the rotating mechanism in the preferred embodiment of the portable terminal of **FIG. 8**. **FIG. 11**(A) is a diagram showing a configuration where the first casing and the second casing are superposed on each other and **FIG. 11**(B) is a diagram showing a configuration where the first casing is rotated substantially 180 degrees relative to the second casing;

[0025] **FIG. 12** is an exploded perspective view of an embodiment of a rotating mechanism in yet another preferred embodiment of the portable terminal;

[0026] **FIG. 13** is a perspective view of a built-up condition of the rotating mechanism in the preferred embodiment of the portable terminal of **FIG. 12**;

[0027] **FIG. 14** is a front view of the built-up condition of the rotating mechanism in the preferred embodiment of the portable terminal of **FIG. 12**.;

[0028] FIGS. **15**(A) and **15**(B) are side views for the preferred embodiment of the portable terminal of **FIG. 12**;

[0029] **FIG. 16** is an enlarged explanatory side view for a configuration (A) where the first casing and the second casing are superposed on each other, a configuration (B) where the first casing is rotated 90 degrees, and a configuration (C) where it is rotated 180 degrees, with respect to the rotating mechanism in the preferred embodiment of the portable terminal of **FIG. 12**;

[0030] **FIG. 17** is an enlarged cross section for a configuration (A) where the first casing and the second casing are superposed on each other and a configuration (B) where the first casing is rotated 180 degrees, with respect to the rotating mechanism in the preferred embodiment of the portable terminal of **FIG. 12**;

[0031] **FIG. 18** is a schematic plan view showing an opened configuration of the first and second casings forming the portable phone as an example of the portable terminal of the preferred embodiment of **FIG. 12**;

[0032] **FIG. 19** is a schematic plan view showing a closed configuration of the first and second casings in the portable phone in **FIG. 18**;

[0033] **FIG. 20** is a diagram showing the closed configuration of the first and second casings in the portable phone in **FIG. 18**: **FIG. 20**(A) is a schematic front view and **FIG. 20**(B) is an enlarged front view showing a pivot portion of **FIG. 20**(A);

[0034] **FIG. 21** is a cross section showing engaging means and coupling means in the portable phone in **FIG. 18**;

[0035] **FIG. 22** is an enlarged perspective view showing the coupling means in the portable phone in **FIG. 18**;

[0036] **FIG. 23** is an enlarged cross section showing the engaging means of the portable phone according to a further preferred embodiment of the present invention;

[0037] **FIG. 24** is an enlarged cross sectional perspective view showing engaging means of a portable phone according to the preferred embodiment of **FIG. 23**;

[0038] **FIG. 25** is a diagram showing an example of a conventional portable terminal: **FIG. 25**(A) is a plan view showing an opened configuration and **FIG. 25**(B) is a plan view showing a closed condition; and

[0039] **FIG. 26** is a diagram showing another example of a conventional portable terminal: **FIG. 26**(A) is a plan view showing its opened configuration and **FIG. 26**(B) is a partially broken schematic side view showing its opened configuration.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0040] The preferred embodiments of the present invention will now be described in detail for purposes of illus-